

## Chapter 5: Treatment Recommendations

### 5 Administration & Implementation Strategy

Critical to the implementation of this Wildfire Mitigation Plan will be the identification of, and implementation of, an integrated schedule of treatments targeted at achieving an elimination of the lives lost, and reduction in structures destroyed, infrastructure compromised, and unique ecosystems damaged that serve to sustain the way-of-life and economy of Clearwater County and the region. Since there are many land management agencies and thousands of private landowners in Clearwater County, it is reasonable to expect that differing schedules of adoption will be made and varying degrees of compliance will be observed across all ownerships.

Clearwater County encourages the philosophy of instilling disaster resistance in normal day-to-day operations. By implementing plan activities through existing programs and resources, the cost of mitigation is often a small portion of the overall cost of a project's design or program.

The federal land management agencies in Clearwater County, specifically the USDA Forest Service and the Bureau of Land Management, are participants in this planning process and have contributed to its development. Where available, their schedule of land treatments have been considered in this planning process to better facilitate a correlation between their identified planning efforts and the efforts of Clearwater County.

All risk assessments were made based on the conditions existing during 2004-05, thus, the recommendations in this section have been made in light of those conditions. However, the components of risk and the preparedness of the county's resources are not static. It will be necessary to fine-tune this plan's recommendations annually to adjust for changes in the components of risk, population density changes, infrastructure modifications, and other factors.

As part of the Policy of Clearwater County in relation to this planning document, this entire **Wildfire Mitigation Plan** should be reviewed annually at a special meeting of the Clearwater County Commissioners, open to the public and involving all municipalities/jurisdictions, where action items, priorities, budgets, and modifications can be made or confirmed. A written review of the plan should be prepared (or arranged) by the Chairman of the County Commissioners, detailing plans for the year's activities, and made available to the general public ahead of the meeting (in accord with the Idaho Open Public Meeting Laws). Amendments to the plan should be detailed at this meeting, documented, and attached to the formal plan as an amendment to the Wildfire Mitigation Plan. Re-evaluation of this plan should be made on the 5<sup>th</sup> anniversary of its acceptance, and every 5-year period following.

#### 5.1 Prioritization of Mitigation Activities

The prioritization process will include a special emphasis on cost-benefit analysis review. The process will reflect that a key component in funding decision is a determination that the project will provide an equivalent or more in benefits over the life of the project when compared with the costs. Projects will be administered by local jurisdictions with overall coordination provided by the County Disaster Services Coordinator.

County Commissioners and the elected officials of all jurisdictions will evaluate opportunities and establish their own unique priorities to accomplish mitigation activities where existing funds and resources are available and there is community interest in implementing mitigation measures. If no federal funding is used in these situations, the prioritization process may be less formal. Often the types of projects that the County can afford to do on their own are in relation

to improved codes and standards, department planning and preparedness, and education. These types of projects may not meet the traditional project model, selection criteria, and benefit-cost model. The County will consider all pre-disaster mitigation proposals brought before the County Commissioners by department heads, city officials, fire districts and local civic groups.

When federal or state funding is available for hazard mitigation, there are usually requirements that establish a rigorous benefit-cost analysis as a guiding criteria in establishing project priorities. The county will understand the basic federal grant program criteria which will drive the identification, selection, and funding of the most competitive and worthy mitigation projects. FEMA's three grant programs (the post-disaster Hazard Mitigation Grant Program, the pre-disaster Flood Mitigation Assistance and Pre-Disaster Mitigation grant programs) that offer federal mitigation funding to state and local governments all include the benefit-cost and repetitive loss selection criteria.

The prioritization of projects will occur annually and be facilitated by the County Emergency Services Coordinator to include the County Commissioner's Office, City Mayors and Councils, Fire District Chiefs and Commissioners, agency representatives (USFS, State Lands, etc.). The prioritization of projects will be based on the selection of projects which create a balanced approach to pre-disaster mitigation which recognizes the hierarchy of treating in order (highest first):

- People and Structures
- Infrastructure
- Local and Regional Economy
- Traditional Way of Life
- Ecosystems

### **5.1.1 Prioritization Scheme**

A numerical scoring system is used to prioritize projects. This prioritization serves as a guide for the county when developing mitigation activities. This project prioritization scheme has been designed to rank projects on a case by case basis. In many cases, a very good project in a lower priority category could outrank a mediocre project in a higher priority. The county mitigation program does not want to restrict funding to only those projects that meet the high priorities because what may be a high priority for a specific community may not be a high priority at the county level. Regardless, the project may be just what the community needs to mitigate disaster. The flexibility to fund a variety of diverse projects based on varying reasons and criteria is a necessity for a functional mitigation program at the County and community level.

To implement this case by case concept, a more detailed process for evaluating and prioritizing projects has been developed. Any type of project, whether county or site specific, will be prioritized in this more formal manner.

To prioritize projects, a general scoring system has been developed. This prioritization scheme has been used in statewide all hazard mitigations plans. These factors range from cost-benefit ratios, to details on the hazard being mitigated, to environmental impacts.

Since planning projects are somewhat different than non-planning projects when it comes to reviewing them, different criteria will be considered, depending on the type of project.

The factors for the non-planning projects include:

- ☐ Cost/Benefit
- ☐ Population Benefit

- ☐ Property Benefit
- ☐ Economic Benefit
- ☐ Project Feasibility (environmentally, politically, socially)
- ☐ Hazard Magnitude/Frequency
- ☐ Potential for repetitive loss reduction
- ☐ Potential to mitigate hazards to future development
- ☐ Potential project effectiveness and sustainability

The factors for the planning projects include:

- ☐ Cost/Benefit
- ☐ Vulnerability of the community or communities
- ☐ Potential for repetitive loss reduction
- ☐ Potential to mitigate hazards to future development

Since some factors are considered more critical than others, two ranking scales have been developed. A scale of 1-10, 10 being the best, has been used for cost, population benefit, property benefit, economic benefit, and vulnerability of the community. Project feasibility, hazard magnitude/frequency, potential for repetitive loss reduction, potential to mitigate hazards to future development, and potential project effectiveness and sustainability are all rated on a 1-5 scale, with 5 being the best. The highest possible score for a non-planning project is 65 and for a planning project is 30.

The guidelines for each category are as follows:

#### **5.1.1.1 Benefit / Cost**

The analysis process will include summaries as appropriate for each project, but will include benefit / cost analysis results. Projects with a negative benefit / cost analysis result will be ranked as a 0. Projects with a positive Benefit / Cost analysis will receive a score equal to the projects Benefit / Cost Analysis results divided by 10. Therefore a project with a BC ratio of 50:1 would receive 5 points, a project with a BC ratio of 100:1 (or higher) would receive the maximum points of 10.

#### **5.1.1.2 Population Benefit**

Population Benefit relates to the ability of the project to prevent the loss of life or injuries. A ranking of 10 has the potential to impact over 3,000 people. A ranking of 5 has the potential to impact 100 people, and a ranking of 1 will not impact the population. In some cases, a project may not directly provide population benefits, but may lead to actions that do, such as in the case of a study. Those projects will not receive as high of a rating as one that directly effects the population, but should not be considered to have no population benefit.

#### **5.1.1.3 Property Benefit**

Property Benefit relates to the prevention of physical losses to structures, infrastructure, and personal property. These losses can be attributed to potential dollar losses. Similar to cost, a ranking of 10 has the potential to save over \$1,000,000 in losses, a ranking of 5 has the potential to save roughly \$100,000 in losses, and a ranking of 1 only has the potential to save

less than \$100 in losses. In some cases, a project may not directly provide property benefits, but may lead to actions that do, such as in the case of a study. Those projects will not receive as high of a rating as one that directly effects property, but should not be considered to have no property benefit.

#### **5.1.1.4 Economic Benefit**

Economic Benefit is related to the savings from mitigation to the economy. This benefit includes reduction of losses in revenues, jobs, and facility shut downs. Since this benefit can be difficult to evaluate, a ranking of 10 would prevent a total economic collapse, a ranking of 5 could prevent losses to about half the economy, and a ranking of 1 would not prevent any economic losses. In some cases, a project may not directly provide economic benefits, but may lead to actions that do, such as in the case of a study. Those projects will not receive as high of a rating as one that directly affects the economy, but should not be considered to have no economic benefit.

#### **5.1.1.5 Vulnerability of the Community**

For planning projects, the vulnerability of the community is considered. A community that has a high vulnerability with respect to other jurisdictions to the hazard or hazards being studied or planned for will receive a higher score. To promote planning participation by the smaller or less vulnerable communities in the state, the score will be based on the other communities being considered for planning grants. A community that is the most vulnerable will receive a score of 10, and one that is the least, a score of 1.

#### **5.1.1.6 Project Feasibility (Environmentally, Politically & Socially)**

Project Feasibility relates to the likelihood that such a project could be completed. Projects with low feasibility would include projects with significant environmental concerns or public opposition. A project with high feasibility has public and political support without environmental concerns. Those projects with very high feasibility would receive a ranking of 5 and those with very low would receive a ranking of 1.

#### **5.1.1.7 Hazard Magnitude/Frequency**

The Hazard Magnitude/Frequency rating is a combination of the recurrence period and magnitude of a hazard. The severity of the hazard being mitigated and the frequency of that event must both be considered. For example, a project mitigating a 10-year event that causes significant damage would receive a higher rating than one that mitigates a 500-year event that causes minimal damage. For a ranking of 5, the project mitigates a high frequency, high magnitude event. A 1 ranking is for a low frequency, low magnitude event. Note that only the damages being mitigated should be considered here, not the entire losses from that event.

#### **5.1.1.8 Potential for repetitive loss reduction**

Those projects that mitigate repetitive losses receive priority consideration here. Common sense dictates that losses that occur frequently will continue to do so until the hazard is mitigated. Projects that will reduce losses that have occurred more than three times receive a rating of 5. Those that do not address repetitive losses receive a rating of 1. Potential to mitigate hazards to future development Proposed actions that can have a direct impact on the vulnerability of future development are given additional consideration. If hazards can be

mitigated on the onset of the development, the county will be less vulnerable in the future. Projects that will have a significant effect on all future development receive a rating of 5. Those that do not affect development should receive a rating of 1.

#### **5.1.1.9 Potential project effectiveness and sustainability**

Two important aspects of all projects are effectiveness and sustainability. For a project to be worthwhile, it needs to be effective and actually mitigate the hazard. A project that is questionable in its effectiveness will score lower in this category. Sustainability is the ability for the project to be maintained. Can the project sustain itself after grant funding is spent? Is maintenance required? If so, are or will the resources be in place to maintain the project. An action that is highly effective and sustainable will receive a ranking of 5. A project with effectiveness that is highly questionable and not easily sustained should receive a ranking of 1.

#### **5.1.1.10 Final ranking**

Upon ranking a project in each of these categories, a total score can be derived by adding together each of the scores. The project can then be ranking high, medium, or low based on the non-planning project thresholds of:

Project Ranking Priority Score

- High 40-65
- Medium 25-39
- Low 9-25

## **5.2 Possible Fire Mitigation Activities**

As part of the implementation of fire mitigation activities in Clearwater County, a variety of management tools may be used. Management tools include but are not limited to the following:

- Homeowner and landowner education
- Building code changes for structures and infrastructure in the WUI
- Home site defensible zone through fuels modification
- Community defensible zone fuels alteration
- Access improvements
- Access creation
- Emergency response enhancements (training, equipment, locating new fire stations, new fire districts, merging existing districts)
- Regional land management recommendations for private, state, and federal landowners

Maintaining private property rights will continue to be one of the guiding principles of this plan's implementation. Sound risk management is a foundation for all fire management activities. Risks and uncertainties relating to fire management activities must be understood, analyzed, communicated, and managed as they relate to the cost of either doing or not doing an activity. Net gains to the public benefit will be an important component of decisions.

### **5.3 WUI Safety & Policy**

Wildfire mitigation efforts must be supported by a set of policies and regulations at the county level that maintain a solid foundation for safety and consistency. The recommendations enumerated here serve that purpose. Because these items are regulatory in nature, they will not necessarily be accompanied by cost estimates. These recommendations are policy related in nature and therefore are recommendations to the appropriate elected officials; debate and formulation of alternatives will serve to make these recommendations suitable and appropriate.

#### **5.3.1 Existing Practices That Should Continue**

Clearwater County currently is implementing many projects and activities that, in their absence, could lead to increased wildland fire loss potential. By enumerating some of them here, it is the desire of the authors to point out successful activities.

- Clearwater County is currently in the process of updating their rural addressing.
- Project Impact
- Current mutual aid agreements between the Clearwater-Potlatch Timber Protective Association and all of the local fire departments.
- County road departments removes vegetation and other hazardous fuels away from road right of ways

### 5.3.2 Proposed Activities

Table 5.1. WUI Action Items in Safety and Policy.

Action Item	Goals and Objectives	Responsible Organization	Action Items & Planning Horizon
<b>5.1.a: Amend existing building codes to apply equally to new single housing construction as it does to sub-divisions.</b> Make sure existing policy is comprehensive to wildland fire risks.	<b>Protection of people and structures</b> by applying a standard of road widths, access, and building regulations suitable to insure new homes can be protected while minimizing risks to firefighters. (defensible space, roads and access management, water systems, building codes, signage, and maintenance of private forest and range lands)	<b>County Commissioners</b> in cooperation with Rural Fire Districts and Planning and Zoning.	<ul style="list-style-type: none"> <li>Year 1 debate and adoption of revised code (2005).</li> <li>Review adequacy of changes annually, make changes as needed.</li> </ul>
<b>5.1.b: Develop County policy concerning building materials used in high-risk WUI areas on existing structures and new construction</b>	<b>Protection of people and structures</b> by improving the ability of emergency response personnel to respond to threatened homes in high-risk areas.	<b>County Commissioners Office</b> in cooperation with Rural Fire Departments	<b>Year 1 (2005) activity:</b> Consider and develop policy to address construction materials for homes and businesses located in high wildfire risk areas. Specifically, a County policy concerning wooden roofing materials and flammable siding, especially where juxtaposed near heavy wildland fuels.
<b>5.1.c: Develop a formal WUI Advisory Committee to advise County Commissioners on WUI Issues and Treatments</b>	<b>Protection of people and structures</b> by improving the ability of decision makers to make informed decisions about wildfire issues.	<b>County Commissioners Office</b>	<b>Year 1 (2005) activity:</b> Formalize a committee, its membership and service decided on by the County Commissioners, to collaborate on WUI issues within Clearwater County. Members potentially to include land management organizations and companies, private landowners, and fire protection personnel.
<b>5.1.d: Adoption of International Fire Code and creation of a County Fire Warden position that would inspect sites for compliance to the International Fire Code as well as enforce the mandates of the Code.</b>	<b>Protection of people and structures</b> by improving the ability of emergency services personnel to safely and effectively respond to homes.	<b>Planning and Zoning</b> with County Commissioners Office and Rural Fire Departments.	<b>Year 1 (2005) activity:</b> Consider and develop policy to enforce the International Fire Code regulations already adopted by the State of Idaho and seek funding to create a County Fire Warden position.
<b>5.1.e: Develop a County Commissioner's Office policy to support the applications for grant monies for projects</b>	<b>Protection of people and structures</b> by improving the ability of residents and organizations to implement sometimes costly projects.	<b>County Commissioners Office</b>	<b>Ongoing activity:</b> Support grant applications as requested in a manner consistent with applications from residents

**Table 5.1. WUI Action Items in Safety and Policy.**

<b>Action Item</b>	<b>Goals and Objectives</b>	<b>Responsible Organization</b>	<b>Action Items &amp; Planning Horizon</b>
resulting from recommendations in this plan.			and organizations in Clearwater County.

## 5.4 People and Structures

The protection of people and structures will be tied together closely as the loss of life in the event of a wildland fire is generally linked to a person who could not, or did not, flee a structure threatened by a wildfire. The other incident is a fire fighter who suffers the loss of life during the combating of a fire. Many of the recommendations in this section will define a set of criteria for implementation while others will be rather specific in extent and application.

Many of the recommendations in this section involve education and increasing awareness of the residents of Clearwater County. These recommendations stem from a variety of factors including items that became obvious during the analysis of the public surveys, discussions during public meetings, and observations about choices made by residents living in the Wildland-Urban Interface. Over and over, a common theme was present that pointed to a situation of landowners not recognizing risk factors:

- Homeowners in the public mail survey ranked their home site wildfire risk factors significantly lower than a random sample of home rankings completed by fire mitigation specialists.
- Fire District personnel pointed to numerous examples of inadequate access to homes of people who believe they have adequate ingress.
- Discussions with the general public indicated an awareness of wildland fire risk, but they could not specifically identify risk factors.
- Over half of the respondents to the public mail survey indicated (60%) that they want to participate in educational opportunities focused on the WUI and what they can do to increase their home's chances of surviving a wildfire.

In addition to those items enumerated in Table 5.1, residents and policy makers of Clearwater County should recognize certain factors that exist today, that in their absence would lead to an increase in the risk factors associated with wildland fires in the WUI of Clearwater County. These items listed below should be encouraged, acknowledged, and recognized for their contributions to the reduction of wildland fire risks:

- **Livestock Grazing** in and around the communities of Clearwater County has led to a reduction of many of the fine fuels that would have been found in and around the communities and in the wildlands of Clearwater County. Domestic livestock not only eat these grasses, forbs, and shrubs, but also trample certain fuels to the ground where decomposition rates may increase. Livestock ranchers tend their stock, placing resource professionals into the forests and rangelands of the area where they may observe ignitions, or potentially risky activities. There are ample opportunities throughout the county to increase grazing. This could contribute to the economic output of the county as well as reduce the fuel loading. Livestock grazing in this region should be encouraged into the future as a low cost, positive tool of wildfire mitigation in the Wildland-Urban Interface and in the wildlands.



- **Forest Management** in Clearwater County has been affected greatly by the reduction of operating sawmills in the region. However, the active forest management program of the Idaho Department of Lands and the Potlatch Corporation and many of the private and other industrial forestland owners in the region has led to a significant reduction of wildland fuels where they are closest to homes and infrastructure. In addition, forest resource professionals managing these lands and the lands of the private owners and federal agencies are generally trained in wildfire protection and recognize risk factors when they occur. One of the reasons that Clearwater County forestlands have not been impacted by wildland fires to a greater degree historically, is the presence and activities related to active forest management.
- **Agriculture** is a significant component of Clearwater County's economy. Much of the northwestern portion of the county is intermixed with agricultural crops. The original conversion of these lands to agriculture from rangeland and forestland, was targeted at the most productive soils and juxtaposition to infrastructure. Many of these productive ecosystems were consequently also at some of the highest risk to wildland fires because biomass accumulations increased in these productive landscapes. The result today, is that much of the rangeland historically prone to frequent fires, has been converted to agriculture, which is at a much lower risk than prior to its conversion. The preservation of a viable agricultural economy in Clearwater County is integral to the continued management of wildfire risk in this region.

**Table 5.2. WUI Action Items for People and Structures.**

<b>Action Item</b>	<b>Goals and Objectives</b>	<b>Responsible Organization</b>	<b>Action Items, Planning Horizon and Estimated Costs</b>
<b>5.2.a: Youth and Adult Wildfire Educational Programs</b>	<b>Protect people and structures</b> by increasing awareness of WUI risks, how to recognize risk factors, and how to modify those factors to reduce risk	Cooperative effort including: <ul style="list-style-type: none"> <li>University of Idaho Cooperative Extension</li> <li>Idaho Department of Lands</li> <li>USFS Clearwater National Forest, Coeur d'Alene Tribal, and State and Private Forestry Offices</li> <li>Bureau of Land Management</li> <li>Local School Districts</li> </ul>	Evaluate effectiveness of currently funded County education programs. If possible, use existing educational program materials and staffing. These programs may need reformatted. Formal needs assessment should be responsibility of University of Idaho Cooperative Extension faculty and include the development of an integrated WUI educational series by year 3 (2006). Costs initially to be funded through existing budgets for these activities to be followed with grant monies to continue the programs as identified in the formal needs assessment. Detailed information regarding home defensible space requirements is contained on the FireWise CD, which can be purchased and personalized by the County. The CD costs \$2,500.
<b>5.2.b: Wildfire risk assessments of homes in identified communities</b>	<b>Protect people and structures</b> by increasing awareness of specific risk factors of individual home sites in the at-risk landscapes. Only after these are completed can home site treatments follow.	To be implemented by <b>County Commissioners Office</b> in cooperation with the <b>Rural Fire Departments</b> . Actual work may be completed by Wildfire Mitigation Consultants or trained volunteers, and listed cities (below).	<ul style="list-style-type: none"> <li><b>Cost:</b> Approximately \$100 per home site for inspection, written report, and discussions with the homeowners.</li> <li>There are approximately 3,444 housing units in Clearwater. Many of these structures would benefit from a home site inspection and budget determination. The number in each community are detailed below.</li> <li><b>Action Item:</b> Secure funding and contract to complete the inspections during years 1 &amp; 2 (2005-06)</li> <li>Home site inspection reports and estimated budget for each home site's treatments will be a requirement to receive funding for treatments through grants.</li> </ul>
<ul style="list-style-type: none"> <li>Ahsahka – 446 homes, 90% need Home defensibility inspections, cost estimate of \$40,140</li> <li>Cardiff – 46 homes, 90% need Home defensibility inspections, cost estimate of \$4,140</li> <li>Cavendish – 120 homes, 25% need Home defensibility inspections, cost estimate of \$3,000</li> <li>Dent – 69 homes, 85% need Home defensibility inspections, cost estimate of \$5,800</li> <li>Elk River – 197 homes, 90% need Home defensibility inspections, cost estimate of \$17,730</li> <li>Grangemont – 81 homes, 100% need Home defensibility inspections, cost estimate of \$8,100</li> <li>Greer – 45 homes, 75% need Home defensibility inspections, cost estimate of \$3,300</li> <li>Headquarters – 42 homes, 90% need Home defensibility inspections, cost estimate of \$3,800</li> <li>Jaype – 20 homes, 90% need Home defensibility inspections, cost estimate of \$1,800</li> <li>Lakeview Estates – 27 homes, 75% need Home defensibility inspections, cost estimate of \$2,000</li> </ul>			

**Table 5.2. WUI Action Items for People and Structures.**

Action Item	Goals and Objectives	Responsible Organization	Action Items, Planning Horizon and Estimated Costs
			<ul style="list-style-type: none"> <li>Orofino – 670 homes, 50% need Home defensibility inspections, cost estimate of \$33,500</li> <li>Pierce – 366 homes, 85% need Home defensibility inspections, cost estimate of \$31,100</li> <li>Sunnyside Area &amp; New Hope – 118 homes, 35% need Home defensibility inspections, cost estimate of \$4,100</li> <li>Teaken – 28 homes, 25% need Home defensibility inspections, cost estimate of \$700</li> <li>Weippe – 500 homes, 50% need Home defensibility inspections, cost estimate of \$25,000</li> <li>Other Rural Areas not identified above – 3,175 homes, 75% need Home defensibility inspections, cost estimate \$238,125</li> <li><b>Total All Items above: \$422,335</b></li> </ul>
<b>5.2.c: Home Site WUI Treatments</b>	<b>Protect people, structures, and increase fire fighter safety</b> by reducing the risk factors surrounding homes in the WUI of Clearwater County	<p><b>County Commissioners</b> in cooperation with Fire Mitigation Consulting company and Rural Fire Districts, and listed cities (below).</p> <p><i>Complete concurrently with 5.4.b.</i></p>	<ul style="list-style-type: none"> <li>Actual funding level will be based on the outcomes of the home site assessments and cost estimates</li> <li><b>Estimate</b> that treatments will cost approximately \$800 per home site for a defensible space of roughly 150’.</li> <li>Home site treatments can begin after the securing of funding for the treatments and immediate implementation in 2005 and will continue from year 1 through 5 (2009).</li> </ul>
			<ul style="list-style-type: none"> <li>Ahsahka – 446 homes, 90% need Home defensibility inspections, cost estimate of \$321,120</li> <li>Cardiff – 46 homes, 90% need Home defensibility inspections, cost estimate of \$33,120</li> <li>Cavendish – 120 homes, 25% need Home defensibility inspections, cost estimate of \$24,000</li> <li>Dent – 69 homes, 85% need Home defensibility inspections, cost estimate of \$46,920</li> <li>Elk River – 197 homes, 90% need Home defensibility inspections, cost estimate of \$141,840</li> <li>Grangemont – 81 homes, 100% need Home defensibility inspections, cost estimate of \$64,800</li> <li>Greer – 45 homes, 75% need Home defensibility inspections, cost estimate of \$27,000</li> <li>Headquarters – 42 homes, 90% need Home defensibility inspections, cost estimate of \$30,240</li> <li>Jaype – 20 homes, 90% need Home defensibility inspections, cost estimate of \$14,400</li> <li>Lakeview Estates – 27 homes, 75% need Home defensibility inspections, cost estimate of \$16,200</li> <li>Orofino – 670 homes, 50% need Home defensibility inspections, cost estimate of \$268,000</li> <li>Pierce – 366 homes, 85% need Home defensibility inspections, cost estimate of \$248,880</li> <li>Sunnyside Area &amp; New Hope – 118 homes, 35% need Home defensibility inspections, cost estimate of \$33,040</li> <li>Teaken – 28 homes, 25% need Home defensibility inspections, cost estimate of \$5,600</li> <li>Weippe – 500 homes, 50% need Home defensibility inspections, cost estimate of \$200,000</li> <li>Other Areas not identified above – 3,175 homes, 75% need Home defensibility inspections, cost estimate \$1,905,000</li> <li><b>Total All Items above: \$3,380,160</b></li> </ul>

**Table 5.2. WUI Action Items for People and Structures.**

<b>Action Item</b>	<b>Goals and Objectives</b>	<b>Responsible Organization</b>	<b>Action Items, Planning Horizon and Estimated Costs</b>
<b>5.2.d: Community Defensible Zone WUI Treatments</b>	<b>Protect people, structures, and increase fire fighter safety</b> by reducing the risk factors surrounding high risk communities in the WUI of Clearwater County	<b>County Commissioners</b> in cooperation with Fire Mitigation Consultants and Rural Fire Districts	<ul style="list-style-type: none"> <li>• Actual funding level will be based on the outcomes of the home site assessments and cost estimates.</li> <li>• <b>Years 2-5 (2005-09):</b> Treat high risk wildland fuels from home site defensible space treatments (5.4.c) to an area extending 400 feet to 750 feet beyond home defensible spaces, where steep slopes and high accumulations of risky fuels exist. Should link together home treatment areas. Treatments target high risk concentrations of fuels and not 100% of the area identified. To be completed only after or during the creation of home defensible spaces have been implemented.</li> <li>• <b>Communities and areas to target:</b> Greer, Pierce, Headquarters, Cardiff, Orofino, Freeman Creek, Ahsahka, Dent, and Elk River.</li> <li>• Approximate average cost on a per structure basis is \$750-\$1,500 depending on extent of home defensibility site treatments, for a cost estimate of \$1.75 million.</li> </ul>
<b>5.2.e: Maintenance of Home Site WUI Treatments</b>	<b>Protect people, structures, and increase fire fighter safety</b> by reducing the risk factors surrounding homes in the WUI of Clearwater County	<b>County Commissioners Office</b> in cooperation with Rural Fire Departments and local home owners	<ul style="list-style-type: none"> <li>• Home site defensibility treatments must be maintained periodically to sustain benefits of the initial treatments.</li> <li>• Each site should be assessed 5 years following initial treatment</li> <li>• Estimated re-inspection cost will be \$50 per home site on all sites initially treated or recommended for future inspections</li> <li>• Follow-up inspection reports with treatments as recommended years 5 through 10.</li> </ul>
<b>5.2.f: Re-entry of Home Site WUI Treatments</b>	<b>Protect people, structures, and increase fire fighter safety</b> by reducing the risk factors surrounding homes in the WUI of Clearwater County	<b>County Commissioners Office</b> in cooperation with Rural Fire Departments and local home owners	<ul style="list-style-type: none"> <li>• Re-entry treatments will be needed periodically to maintain the benefits of the initial WUI home treatments. Each re-entry schedule should be based on the initial inspection report recommendations, observations, and changes in local conditions. Generally occurs every 5-10 years.</li> </ul>

**Table 5.2. WUI Action Items for People and Structures.**

<b>Action Item</b>	<b>Goals and Objectives</b>	<b>Responsible Organization</b>	<b>Action Items, Planning Horizon and Estimated Costs</b>
<b>5.2.g: Access Improvements of bridges, cattle guards, and limiting road surfaces. [Wells Bench Cutoff, Upper Fords Creek Road, Lower Fords Creek Road, Old Ahsahka Grade, Old Peck Grade, Crockett Bench, Deer Creek, and Huckleberry Bench Road]</b>	<b>Protection of people, structures, infrastructure, and economy</b> by improving access for residents and fire fighting personnel in the event of a wildfire. Reduces the risk of a road failure that leads to the isolation of people or the limitation of emergency vehicle and personnel access during an emergency.	<b>County Roads and Bridges Department</b> in cooperation with US Forest Service, BLM, State of Idaho (Lands and Transportation), and forestland or rangeland owners.	<ul style="list-style-type: none"> <li>• <b>Year 1 (2005):</b> Update existing assessment of travel surfaces, bridges, and cattle guards in Clearwater County as to location. Secure funding for implementation of this project (grants)</li> <li>• <b>Year 2 (2006):</b> Conduct engineering assessment of limiting weight restrictions for all surfaces (e.g., bridge weight load maximums). Estimate cost of \$150,000 which might be shared between County, USFS, BLM, State, and private based on landownership associated with road locations.</li> <li>• <b>Year 2 (2007):</b> Post weight restriction signs on all crossings, copy information to rural fire districts and wildland fire protection agencies in affected areas. Estimate cost at roughly \$25-\$30,000 for signs and posting.</li> <li>• <b>Year 3 (2008):</b> Identify limiting road surfaces in need of improvements to support wildland fire fighting vehicles and other emergency equipment. Develop plan for improving limiting surfaces including budgets, timing, and resources to be protected for prioritization of projects (benefit/cost ratio analysis). Create budget based on full assessment.</li> </ul>
<b>5.2.h: Access Improvements for communities of Greer, Freeman Creek, Dent, Elk River, Pierce, Weippe, Grangemont, Jaype, Cardiff, and Headquarters.</b>	<b>Protection of people, structures, infrastructure, and economy</b> by improving access for residents and fire fighting personnel in the event of a wildfire. Allows for alternative escape route when the primary access is compromised.	<b>County Roads and Bridges Department</b> in cooperation with US Forest Service, BLM, State of Idaho (Lands and Transportation), industrial forestland owners.	<ul style="list-style-type: none"> <li>• <b>Year 1 (2005):</b> Update existing assessment of State Route 11, Freeman Creek Road, Elk River Road, Wells Bench Road, State Route 8, and Grangemont Road as to limiting areas of road and bridges. Secure funding for implementation of this project based on ownership and use.</li> <li>• <b>Year 2 (2006):</b> Secure funding and implement projects to improve limiting access along this road to facilitate broader range of vehicles using this route as an emergency route. No estimate of costs until priorities are set and options identified.</li> </ul>

Table 5.2. WUI Action Items for People and Structures.

Action Item	Goals and Objectives	Responsible Organization	Action Items, Planning Horizon and Estimated Costs
5.2.i: Access Improvements through road-side fuels management. [Upper Fords Creek Road, Lower Fords Creek Road, Deer Creek Road, State Highway 11, Freeman Creek Road, Elk River Road, State Highway 8, Grangemont Road, and Huckleberry Bench Road]	<p><b>Protection of people, structures, infrastructure, and economy</b> by improving access for residents and fire fighting personnel in the event of a wildfire.</p> <p>Allows for a road based defensible area that can be linked to a terrain based defensible areas.</p>	<p><b>County Roads and Bridges Department</b> in cooperation with US Forest Service, BLM, State of Idaho (Lands and Transportation), and forestland or rangeland owners.</p>	<ul style="list-style-type: none"> <li>• <b>Year 1 (2005):</b> Update existing assessment of roads in Clearwater County as to location. Secure funding for implementation of this project (grants).</li> <li>• <b>Year 2 (2006):</b> Specifically address access issues listed in column one, plus recreation areas, and others identified in assessment. Target 100' on downhill side of roads and 75' on uphill side for estimated cost of \$15,000 per mile of road treated. If 350 miles of roadway are prioritized for treatment (est.) the cost would amount to \$ 5,250,000. <b>B/C Ratio of 31:1 is achieved</b>, but is highly variable. Further, the total value of structures in the county is not "protected" by this type of treatment.</li> <li>• <b>Year 3 (2007):</b> Secure funding and implement projects to treat road-side fuels.</li> </ul>

## 5.5 Infrastructure

Significant infrastructure refers to the communications, transportation (road and rail networks), energy transport supply systems (gas and power lines), and water supply that service a region or a surrounding area. All of these components are important to Clearwater County. These networks are by definition a part of the Wildland-Urban Interface in the protection of people, structures, **infrastructure**, and unique ecosystems. Without supporting infrastructure a community's structures may be protected, but the economy and way of life lost. As such, a variety of components will be considered here in terms of management philosophy, potential policy recommendations, and on-the-ground activities.

**Communication Infrastructure:** This component of the WUI seems to be diversified across the county with multiple source and destination points, and a spread-out support network. Although site specific treatments will impact local networks directly, little needs done to insure the system's viability.

**Transportation Infrastructure (road and rail networks):** This component of the WUI has some potential limitations in Clearwater County. The hub of Clearwater County's transportation network is located in Orofino (as is the County Seat and largest population center). Specific infrastructure components have been discussed in this plan.

Potential treatments in reference to the rail lines crossing Clearwater County will be discussed in a subsequent section.

Ignitions along highways are significant and should be addressed as part of the implementation of this plan. Various alternatives from herbicides to intensive livestock grazing coupled with mechanical treatments, have been suggested. As part of the multi-agency WUI team proposed in the previous section, these corridors should be further evaluated with alternatives implemented. A variety of approaches will be appropriate depending on the landowner, fuels present, and other factors. These ignitions are substantial and the potential risk of lives to residents in the area is significant.

Many roads in the county have limiting characteristics, such as steep grades, narrow travel surfaces, sharp turning radii, low load limit bridges and cattle guards, and heavy accumulations of fuels adjacent to, and overtopping some roads. Some of these road surfaces access remote forestland and rangeland areas. While their improvements will facilitate access in the case of a wildfire, they are not necessarily the priority for treatments in the county.

Roads that have these inferior characteristics and access homes and businesses are the priority for improvements in the county. Specific recommendations for these roads are enumerated in Table 5.2.

**Energy Transport Supply Systems (gas and power lines):** (Clearwater County - Appendix I) A number of power lines crisscross Clearwater County. Unfortunately, many of these power lines cross over forestland ecosystems. When fires ignite in these vegetation types, the fires tend to be slower moving and burn at relatively high intensities. Additionally, there is a potential for high temperatures and low humidity with high winds to produce enough heat and smoke to threaten power line stability. Most power line corridors have been cleared of vegetation both near the wires and from the ground below. Observations across the county of these high tension power lines lead to the conclusion that current conditions coupled with urban developments have mitigated this potential substantially. It is the recommendation of this Wildfire Mitigation Plan that this situation be evaluated annually and monitored but that treatments not be specifically targeted at this time. The use of these areas as "fire breaks" should be evaluated

further, especially in light of the treatments enumerated in this plan (eg., intensive livestock grazing, mechanical treatments, and herbicide treatments).

**Water Supply:** In many of Idaho's communities, water is derived from surface flow that is treated and piped to homes and businesses. When wildfires burn a region, they threaten these watersheds by the removal of vegetation, creation of ash and sediment. As such, watersheds should be afforded the highest level of protection from catastrophic wildfire impacts. In Clearwater County, water is supplied to many homes by single home or multiple home wells; however, the community of Pierce depends on the Canal Creek Watershed as its primary water source.

As a priority recommendation of this plan, it is strongly suggested that Watershed Management Plans for the Canal Creek Watershed be developed to plan for and implement a management program that specifically mitigates wildfire potential while managing the watershed for sustained water flow that is clean and timed according to the needs of the community.

### 5.5.1 Proposed Activities

**Table 5.3. Infrastructure Enhancements.**

Action Item	Goals and Objectives	Responsible Organization	Action Items & Planning Horizon
<b>5.3.a: Post FEMA "Emergency Evacuation Route" signs along the identified Primary and secondary access routes in the county.</b>	<b>Protection of people and structures</b> by informing residents and visitors of <b>significant infrastructure</b> in the county that will be maintained in the case of an emergency.	<b>County Commissioners</b> in cooperation with Rural Fire Districts and Roads Department.	<ul style="list-style-type: none"> <li>• Purchase of signs (2004).</li> <li>• Posting roads and make information available to residents of the importance of Emergency Routes</li> </ul>
<b>5.3.b: Fuels mitigation of the FEMA "Emergency Evacuation Routes" in the county to insure these routes can be maintained in the case of an emergency.</b>	<b>Protection of people and structures</b> by providing residents and visitors with ingress and egress that can be maintained during an emergency.	<b>County Commissioners</b> in cooperation with Rural Fire Districts and Roads Department.	<ul style="list-style-type: none"> <li>• Full assessment of road defensibility and ownership participation (2005).</li> <li>• Implementation of projects (linked to item 5.2.g, 5.2.h, and 5.2.i.</li> </ul>
<b>5.3.c Construction of Deyo Reservoir near Fraser.</b>	<b>Sustainability of Communities</b> by increasing the probability that communities will have reliable and safe drinking water.	<b>County Commissioners</b> in cooperation with Weippe city government and local residents	<ul style="list-style-type: none"> <li>• Identify landowners and seek funding to implement the planning process and project area analysis (2005).</li> <li>• Implementation of project based on results of watershed analysis and engineering specifications (2006-07).</li> </ul>
<b>5.3.d Supply community water systems with an alternative power source.</b>	<b>Sustainability of Communities</b> by increasing the probability that communities will have safe drinking water following a wildfire that burns in the community watershed.	<b>Water Departments and City Governments.</b>	<ul style="list-style-type: none"> <li>• <b>Year 1 (2004):</b> Summarize existing power sources at sites. Identify costs to obtain additional equipment and locate funding opportunities.</li> <li>• <b>Year 2 (2005):</b> Acquire and install backup power sources as needed.</li> </ul>



**Table 5.3. Infrastructure Enhancements.**

<b>Action Item</b>	<b>Goals and Objectives</b>	<b>Responsible Organization</b>	<b>Action Items &amp; Planning Horizon</b>
<b>5.3.e. Watershed Management Plan Development</b> for the Canal Creek Watershed.	<b>Sustainability of Communities</b> by increasing the probability that communities will have safe drinking water following a wildfire that burns in the community watershed.	<b>Water Departments and City Governments.</b>	<ul style="list-style-type: none"> <li>Identify landowners and seek funding to implement the planning process (2005).</li> <li>Implementation of projects based on results of watershed management plans.</li> </ul>

## 5.6 Resource and Capability Enhancements

There are a number of resource and capability enhancements identified by the rural and wildland fire fighting districts in Clearwater County. All of the needs identified by the districts are in line with increasing the ability to respond to emergencies in the WUI and are fully supported by the planning committee.

Specific reoccurring themes of needed resources and capabilities include:

- Retention and recruitment of volunteers
- Training and development of rural firefighters in structure and wildland fire
- Incorporation of communities into current fire districts or the formation of a new district specifically for these residents.

The implementation of each issue will rely on either the isolated efforts of the fire districts or a concerted effort by the county to achieve equitable enhancements across all of the districts. Given historic trends, individual departments competing against neighboring departments for grant monies and equipment will not necessarily achieve county wide equity. However, the Clearwater RC&D may be an organization uniquely suited to work with all of the districts in Clearwater County and adjacent counties to assist in the prioritization of needs across district and even county lines. Once prioritized, the RC&D is in a position to assist these districts with identifying, competing for, and obtaining grants and equipment to meet these needs.

**Table 5.4. WUI Action Items in Fire Fighting Resources and Capabilities.**

<b>Action Item</b>	<b>Goals and Objectives</b>	<b>Responsible Organization</b>	<b>Action Items &amp; Planning Horizon</b>
<b>5.4.a: Enhance radio availability in each district, link into existing dispatch, and improve range within the region, update to new digital, narrow band frequency adopted by feds and state.</b>	<b>Protection of people and structures</b> by direct fire fighting capability enhancements.	<b>Idaho Department of Lands</b> in cooperation with rural and wildland fire districts and County Commissioners	<ul style="list-style-type: none"> <li><b>Year 1 (2005):</b> Summarize existing two-way radio capabilities and limitations. Identify costs to upgrade existing equipment and locate funding opportunities.</li> <li><b>Year 2 (2006):</b> Acquire and install upgrades as needed.</li> <li><b>Year 2-3 (2006-07):</b> Identify opportunities for radio repeater towers located in the region for multi-county benefits.</li> </ul>

**Table 5.4. WUI Action Items in Fire Fighting Resources and Capabilities.**

<b>Action Item</b>	<b>Goals and Objectives</b>	<b>Responsible Organization</b>	<b>Action Items &amp; Planning Horizon</b>
<b>5.4.b: Retention of Volunteer Fire Fighters</b>	<b>Protection of people and structures</b> by direct fire fighting capability enhancements.	<b>Rural and Wildland Fire Districts</b> working with broad base of county citizenry to identify options, determine plan of action, and implement it.	<ul style="list-style-type: none"> <li>• 5 Year Planning Horizon, extended planning time frame</li> <li>• Target an increased recruitment (+10%) and retention (+20% longevity) of volunteers</li> <li>• <b>Year 1 (2005):</b> Develop incentives program and implement it.</li> </ul>
<b>5.4.c: GPS and map water resources available for fire suppression throughout the county and make this information available to fire agencies.</b>	<b>Protection of people and structures</b> by direct fire fighting capability enhancements.	<b>County GIS Department,</b> Rural Fire Departments, Clearwater-Potlatch Timber Protective Association, and other wildland fire districts.	<ul style="list-style-type: none"> <li>• <b>Year 1 (2005):</b> Secure funding for data collection and mapping.</li> <li>• <b>Year 2 (2006):</b> Complete project and data analysis and provide information to emergency services personnel throughout the county.</li> </ul>
<b>5.4.d: Identify areas lacking a sufficient water supply and develop fill sites for use by fire agencies.</b>	<b>Protection of people and structures</b> by direct fire fighting capability enhancements.	<b>County Commissioners</b> and rural and wildland fire districts.	<ul style="list-style-type: none"> <li>• Identify populated areas lacking sufficient water supplies and develop project plans to develop fill or helicopter dipping sites.</li> <li>• Implement project plans.</li> </ul>
<b>5.4.e: Obtain additional personal protective equipment for city and rural fire departments.</b>	<b>Protection of people and structures</b> by direct fire fighting capability enhancements.	<b>Fire Departments</b> and County Commissioners.	<ul style="list-style-type: none"> <li>• Identify needs of each department and secure funding for additional equipment.</li> </ul>
<b>5.4.f: Annex currently unprotected lands between rural fire districts to provide structural protection in hazardous areas.</b>	<b>Protection of people and structures</b> by direct fire fighting capability enhancements.	<b>Rural Fire Departments, local residents, and County Commissioners.</b>	<ul style="list-style-type: none"> <li>• Estimate of costs <ul style="list-style-type: none"> <li>◦ \$250,000</li> </ul> </li> <li>• 2 year planning horizon</li> </ul>
<b>5.4.g: Expand Pierce City Fire Department to cover Judgetown area.</b>	<b>Protection of people and structures</b> by direct fire fighting capability enhancements.	<b>Pierce City Fire Department and local residents.</b>	<ul style="list-style-type: none"> <li>• Estimate of costs <ul style="list-style-type: none"> <li>◦ \$500,000</li> </ul> </li> <li>• 2 year planning horizon</li> </ul>
<b>5.4.h: Develop dry hydrants on Orofino Creek through Pierce to supplement city water supply during a fire emergency.</b>	<b>Protection of people and structures</b> by direct fire fighting capability enhancements.	<b>Pierce City Fire Department and Pierce City Council.</b>	<ul style="list-style-type: none"> <li>• Develop project plan and analysis of project area and secure funding.</li> <li>• Implement project plans.</li> </ul>
<b>5.4.i: Increased training and capabilities of fire fighters</b>	<b>Protection of people and structures</b> by direct fire fighting capability enhancements.	<b>Rural and Wildland Fire Districts</b> working with the <b>BLM, IDL, and USFS</b> for wildland training opportunities and with the <b>State Fire Marshall's</b>	<ul style="list-style-type: none"> <li>• <b>Year 1 (2004):</b> Develop a multi-county training schedule that extends 2 or 3 years in advance (continuously).</li> <li>• Identify funding and</li> </ul>

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**Table 5.4. WUI Action Items in Fire Fighting Resources and Capabilities.**

Action Item	Goals and Objectives	Responsible Organization	Action Items & Planning Horizon
		Office for structural fire fighting training.	resources needed to carry out training opportunities and sources to acquire. <ul style="list-style-type: none"><li>• Year 1 (2005): Begin implementing training opportunities for volunteers.</li></ul>

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## **5.7 Regional Land Management Recommendations**

In section 5.4 of this plan, reference was given to the role that forestry, grazing and agriculture have in promoting wildfire mitigation services through active management. Clearwater County is dominated by wide expanses of forest and rangelands intermixed with communities and rural houses.

Wildfires will continue to ignite and burn fuels and homes depending on the weather conditions and other factors enumerated earlier. However, active land management that modifies fuels, promotes healthy range and forestland conditions, and promotes the use of these natural resources (consumptive and non-consumptive) will insure that these lands have value to society and the local region. We encourage the US Forest Service, the Bureau of Land Management, the Idaho Department of Lands, the Nez Perce Tribe, Industrial land owners, private land owners, and all other landowners in the region to actively administer their Wildland-Urban Interface lands in a manner consistent with the management of reducing fuels and risks in this zone.

### **5.7.1 Railroad Right-of-Way**

There is currently only one active railroad in Clearwater County. The First Subdivision of the Camas Prairie Railroad makes a weekly trip down the Clearwater River hauling primarily logs from Kamiah to the Potlatch Corporation mill in Lewiston. There are a number of curves and sidings where a train may be prone to create sparks, eject hot stack carbon, or blow hot brake shoes, any one of which can easily ignite the light fuels along the railroad corridor. Although there is some potential, this right-of-way has not been a significant source of fire ignitions and is therefore not a priority for fire mitigation treatment in Clearwater County.

### **5.7.2 Dworshak Dam and Reservoir; Corps of Engineers**

#### **5.7.2.1 Historical Mitigation**

The Gold Creek Fire of 1974 was started at an unattended campfire at mini-camp 36.3 on the Dworshak Reservoir. This fire demonstrated the vulnerability of property that is adjacent to land managed by the Corps of Engineers (COE) to wildfire. The COE owns and manages about 30,000 acres of forestland directly adjacent to Dworshak Reservoir. This amounts to, in most areas, only 300 vertical feet up from the ordinary high water mark of the reservoir. This “bathtub ring” is fairly steep and allows for very little chance to stop a large fire before it crosses on to other ownerships.

In 1975, following the Gold Creek Fire, the State of Idaho (State) and COE entered into a Reciprocal Fire Protection Agreement (agreement) as a way to help protect COE managed land

as well as any of the adjacent landowners. Each year since, these agencies have produced annual operating plans to ensure the continuation of this agreement to the present day. Although the agreement is between the COE and the State, it is the Clearwater-Potlatch Timber Protective Association (CPTPA) that administers the agreement on behalf of the State.

The objectives of the agreement are:

- a. Maintain a fire protection system for lands owned by the COE at Dworshak Project.
- b. Provide prevention, detection, pre-suppression, and suppression capability resulting in no closures of COE property.
- c. Limit all wildfires to no more than two (2) acres in size in fuel model "C" and no more than one (1) acre in size in fuel model "G".
- d. Maintain available trained fire suppression personnel.
- e. Maintain fire suppression equipment to initiate first attack capability.
- f. Maintain accurate continuous fire weather data.

In order to annually initiate and effect restrictions the agencies have also agreed to the following around the mini-camps on the reservoir:

Minimum requirements at each mini-camp site will be reviewed by the COE on an annual basis. At a minimum, to diminish wildfire risks, the State provides personnel and equipment to satisfactorily clean and remove organic materials around fire grills, tent pads, fire trails, and tables in mini-camp sites. Maintenance of all the mini-camps is performed on by CPTPA personnel prior to Memorial Day weekend an annual basis.

- a. Mini-camps not meeting the minimum requirements of maintenance may be closed during periods in the high burning index and a COE and State inspection of the site.
- b. No recreational fires will be permitted on COE lands during the fire season except in established and approved campgrounds or picnic areas and contained in established fire grills.
- c. At least one (1) Ax, one (1) Shovel, and one (1) Bucket for carrying water are recommended on CPTPA and COE boats and vehicles on COE lands during the fire season.
- d. After the Burning Index reaches the high level at the Pierce Weather Station for three consecutive days, no open fires will be allowed in campgrounds between the hours of 10 a.m. and 6 p.m. The State will maintain COE Burning Index signs at boat launch ramps, changing levels as necessary. The State will post fire prevention signs at kiosks and at boat ramps giving the fire prevention message. The COE Fire Control Officer and State representative on the reservoir will meet during periods of high or above burning indices to discuss potential problems and necessary closures.
- e. Posting of restrictions will be maintained by the State.

The COE at Dworshak project has developed and maintained a Fire Cache of pumps, hoses, and other fire suppression related equipment for the past 30 years. This cache supported Dworshak employees and CPTPA in wildland fire suppression activities on, and adjacent to, project lands. The Dworshak Natural Resource Management (NRM) Team has chosen not to provide trained personnel, but to logistically support CPTPA in fire suppression activities. Due to this development the COE will allow CPTPA to have exclusive use of and provide maintenance to all fire cache equipment as per the inventory.

As agreed CPTPA will:

- Maintain all fire cache equipment in ready to use condition.
- Provide maintenance for two COE managed pumps (Mark 3 and BB-4).
- Conduct bi-annual (spring and fall) inventories with COE representative.
- Remove unserviceable cache items and coordinate inventory adjustments with COE representatives.
- Provide locks and keys for fire cache.

COE will:

- Provide secure location for fire cache at Dworshak maintenance compound.
- Provide COE representative to assist in inventory process.
- Provide logistical support per available resources.
- COE personnel do not perform wildland fire suppression activities, but are available for insipient response and to assist in logistical support to CPTPA for fires on or are threatening COE property.

This agreement also allows for daily and periodic fire patrols of COE managed property. On a daily basis, the State provides a boat patrol that travels the entire length of the reservoir. Boat patrols are defined as consisting of a minimum of a one-man crew in a boat equipped with fire suppression equipment and an identifiable number visible by air. Boats will have radio contact capability with the State and CB channel 9 for emergencies. Boat patrols will perform routine duties, including observations to detect smoke and presenting the fire prevention message to campers and visitors to the project. Patrols operate during high, very high, and extreme burning indices. The agencies have approved a maximum of 77 patrol days between July 1 and September 15 of each year with the option of an additional 15 patrol days should the fire season be prolonged enough to warrant the need.

In addition to the boat patrols the agencies have approved aerial patrols for a maximum of 45 patrol days between July 1 and September 15 of each year with the option of an additional 15 patrol days should the fire season be prolonged enough to warrant the need. These patrol flights will be used during high visitation periods and very high or extreme fire conditions.

Because of the remoteness of Dworshak and the current draw down situation during the fire season, accessibility to much of the COE land base is greatly limited. The use of helicopters for protection, pre-suppression and suppression activities is critical to increase the ability and timeliness for initial attack. The State makes available a helicopter with water bucket during the period July 1 through September 15 of each year. Standby time is also included during this period when conditions warrant increased protection. The agencies have approved a maximum of 34 flight hours with the option of an additional 10 hours should the fire season be prolonged enough to warrant the need.

The State also provides labor and materials to prescribe burn wildlife browse, logging slash piles, and reservoir debris for the COE. Detailed burn plans are developed to meet the objectives for each planned burn while outlining the specific fire parameters to perform the burn in a safe manner with minimized risk of fire escapement. Burn plans are mutually agreed upon before ignition. For all prescribed burning on COE managed land the State will provide all labor and materials necessary for burn plan development, fire ignition and control for a period of 24 hours following ignition. Fire control includes: monitoring, maintaining firebreaks and extinguishing any fires outside of the burn unit boundary. To provide additional fire protection associated with the COE prescribed burning program the State will continue to actively monitor each prescribed burn unit for 3 days after ignition. If fire behavior or weather conditions warrant, additional monitoring time can be requested by the state or the COE.

### **5.7.2.2 Future Mitigation**

COE and CPTPA personnel have a very good working relationship and current plans are to continue to renew the Annual Operating Plan each year just as they have for the past 30 years. Certain language within the agreement will change as fire situations and conditions continue to change, but there will always be an annual need to maintain fire and fuel breaks around the min-camps and a need for the basic fire patrols around Dworshak Reservoir.

Stewardship projects are timber sales designed for a variety of purposes. One of the underlying benefits of such projects is fire fuel mitigation. Harvesting is done to thin the trees in the understory of the stands, thus reducing the ground and ladder fuel loading on site. The harvest units are then prescribed burned further reducing the fuel load. Historically, these forest stands saw relatively low intensive wildfires on a high frequency basis. In this type of fire regime, wildfires can be more easily suppressed before they achieve proportions that could be considered catastrophic. Over the past 75 years the fire regime has been moving ever faster towards lower frequency fires of high intensity. Wildfires of this magnitude are difficult to control and cause damage on a much larger scale.

COE currently has three such stewardship projects planned. The Little Bay project on the east side of the reservoir lies between Canyon Creek and Cold Springs Group Camp. Harvesting on the Little Bay project began in early summer of 2004 and will continue until September of 2005. Although no infrastructure exists adjacent to this project, a few homes do and would be threatened if a wildfire were to start within the harvest area. The thinning and subsequent prescribed burning that is being accomplished and planned should greatly reduce the risk to these homes.

Second is the Elk Creek Meadows Stewardship project that is scheduled to begin harvesting late in the summer of 2005 or 2006. This project is on the west side of the reservoir between Three Meadows Group Camp and mini-camp E2.5 up Elk Creek. As with Little Bay a few homes could be threatened along with several private parcels of land if a wildfire started under the current fuel conditions. The thinning and subsequent prescribed burning that is planned will greatly increase the suppression abilities of fire fighters and the survivability of these homes.

The third such timber sale is the Ahsahka Stewardship Project. This project is in the earliest of planning stages with harvesting not planned till at least the summer of 2008. It currently begins on the east side of the reservoir near mini-camp 5.8 near Indian Creek and proceeds south towards Merrys Bay and wraps around the Ahsahka hillside and across the North Fork of the Clearwater River up the northwest side to Big Eddy Recreation area. This location borders many houses including Lakewood estates on Eureka Ridge, the main city of Orofino and the town of Ahsahka. Many infrastructure sites are also located near the harvest boundary. Steep slopes and overstocked stands of trees that are at a very high risk of stand replacing wildfire characterize this area. This type of terrain makes it very difficult to control and contain fires as well. Fire protection for the residences and other structures in the area will play a major role in the planning process, design and execution of the Ahsahka Stewardship Project.

### **5.7.3 USDA Forest Service Projects**

The Forest Service guiding documents used to determine land use are the National Fire Plan (NFP), Healthy Forest Restoration Act (HFRA), and the goal statements of the Agency to implement ecosystem restoration, protect communities from wildland fires, and to utilize prescribed fire as a tool in the restoration of the forest and to reduce the effects of wildfire leading to catastrophic loss. During the development of this project acres managed by the Agency that are in Fire Regime Condition Class II and III were analyzed, as defined by the

Forest Service and managed by the Agency within the Wildland Urban Interface (WUI), and the vegetation types that are present on these lands. The acres within the WUI in each County have been mapped and these areas have been identified by the Forest Service as high priority areas to be treated under the NFP and the HFRA.

Within Clearwater County, there are approximately 451,916 acres of Wildland-Urban Interface, of this land the US Forest Service manages approximately 30,286 acres of it. These acres were analyzed for their Current Fire Regime Condition Class. Approximately 3,507 acres of the USDA Forest Service managed lands in Clearwater County are within the WUI and are also currently rated in Fire Regime Condition Class 2 or 3. These are the priority acres in Clearwater County for the USDA Forest Service to treat. Appendix I has a map of these areas specifically identified. Most of the high risk lands are in the area adjacent to Elk River and would be addressed by the Municipal Watershed Management Plan identified in this document. These projects are a very high priority in terms of the protection of life and resources through targeted fuels management.